

CLAIMS

We Claim:

1. A process to produce propylene polymers comprising contacting a metallocene catalyst compound and an activator with a reaction medium comprising propylene, from 0 to 30 volume % of one or more solvents and from 0 to 30 mole % of one or more comonomers, under temperature and pressure conditions below the melting point of the propylene polymer and where:
 - a) the temperature is at or above the critical temperature for the reaction medium, and the pressure is at least 500 kPa above the critical pressure of the reaction medium; or
 - b) the temperature is 1 °C or more above the critical temperature for the reaction medium, and the pressure is at or above the critical pressure of the reaction medium; or
 - c) the temperature is 1 °C or more above the critical temperature for the reaction medium, and the pressure is at least 500 kPa above the critical pressure of the reaction medium,
provided that when the metallocene catalyst compound is 1,2-ethylene bis(indenyl) zirconium di chloride supported on silica or the metallocene catalyst compound is dimethylsilylbis(indenyl) zirconium dichloride supported on silica then the activator is not methyl alumoxane.
2. The process of claim 1 wherein the temperature is 2 °C or more above the critical temperature for the reaction medium.
3. The process of claim 1 wherein the temperature is between 94 and 160 °C.
4. The process of claim 1 wherein the pressure is 1000 kPa or more above the critical pressure for the reaction medium.

5. The process of claim 1 wherein the pressure is between 5.00 and 9 MPa.
6. The process of claim 1 wherein the temperature is between 94 and 130°C and the pressure is between 5.0 and 7 MPa.
7. The process of claim 1 wherein solvent is present at 0 to 15 vol%.
8. The process of claim 1 wherein the comonomer comprises butene, hexene and or octene.
9. The process of claim 1 wherein the comonomer comprises from 0.5 to 5 mole% ethylene.
10. The process of claim 1 where the metallocene catalyst compound is represented by the formula: $L_z(Cp)(Q)M^mX_n$ where:
Cp is a substituted or unsubstituted cyclopentadienyl ring, a substituted or unsubstituted indenyl ring or a substituted or unsubstituted fluorenyl ring;
Q is a heteroatom containing group;
z is 0 or 1;
L is a bridging group connecting Cp to Q,
M is a Group 4, 5, or 6 transition metal;
m is 3, 4, 5 or 6;
X is a halogen or a substituted or unsubstituted hydrocarbyl group, a substituted or unsubstituted hydrocarboxy group, or a substituted or unsubstituted heteroatom containing group; and
n is m minus 2.
11. The process of claim 1 where the metallocene catalyst compound is represented by the formula: $L_z(Cp)_2M^mX_n$ where:

each Cp is independently a substituted or unsubstituted cyclopentadienyl ring, a substituted or unsubstituted indenyl ring or a substituted or unsubstituted fluorenyl ring;

z is 0 or 1;

L is a bridging group connecting Cp to Cp,

M is a Group 4, 5, or 6 transition metal;

m is 3, 4, 5 or 6;

X is a halogen or a substituted or unsubstituted hydrocarbyl group, a substituted or unsubstituted hydrocarboxy group, or a substituted or unsubstituted heteroatom containing group; and

n is m minus 2.

12. The process of claim 11 wherein z is 1, L is represented by the formula:
R_qSi- where each R is, independently, a substituted or unsubstituted C₁ to C₂₀ hydrocarbyl group and q is 1, 2, 3 or 4; and both Cp groups are indenyl rings substituted at the 2 and 4 positions.
13. The process of claim 10 wherein z is 1, L is represented by the formula:
R_qSi- where each R is, independently, a substituted or unsubstituted C₁ to C₂₀ hydrocarbyl group and q is 1, 2, 3 or 4; and Q is a nitrogen containing group.
14. The process of any of claims 1 to 9 wherein the metallocene catalyst compound comprises one or more of:
dimethylsiladiyl(2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium dichloride;
dimethylsiladiyl(2-ethyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium dichloride;
dimethylsiladiyl(2-n-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium dichloride;
dimethylsiladiyl(2-iso-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium dichloride;

dimethylsiladiyl(2-n-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dichloride;

dimethylsiladiyl(2-iso-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dichloride;

dimethylsiladiyl(2-sec-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dichloride;

dimethylsiladiyl(2-tert-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dichloride;

dimethylsiladiyl(2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium
dichloride;

dimethylsiladiyl(2-ethyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium
dichloride;

dimethylsiladiyl(2-n-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium
dimethylsiladiyl(2-iso-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium
dichloride;

dimethylsiladiyl(2-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium
dichloride;

9-silafluorendiyl(2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dichloride;

9-silafluorendiyl(2-ethyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dichloride;

9-silafluorendiyl(2-n-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dichloride;

9-silafluorendiyl(2-iso-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dichloride;

9-silafluorendiyl(2-n-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dichloride;

9-silafluorendiyl(2-iso-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dichloride;

9-silafluorendiyl(2-sec-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dichloride;

9-silafluorendiyl(2-tert-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dichloride;

9-silafluorendiyl(2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium
dichloride;

9-silafluorendiyl(2-ethyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium
dichloride;

9-silafluorendiyl(2-n-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium
dichloride;

9-silafluorendiyl(2-iso-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium
dichloride;

9-silafluorendiyl(2-n-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium
dichloride;

9-silafluorendiyl(2-iso-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium
dichloride;

9-silafluorendiyl(2-sec-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium
dichloride;

9-silafluorendiyl(2-tert-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium
dichloride;

dimethylsiladiyl(2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dimethyl;

dimethylsiladiyl(2-ethyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dimethyl;

dimethylsiladiyl(2-n-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dimethyl;

dimethylsiladiyl(2-iso-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dimethyl;

dimethylsiladiyl(2-n-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dimethyl;

dimethylsiladiyl(2-iso-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dimethyl;

dimethylsiladiyl(2-sec-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dimethyl;

dimethylsiladiyl(2-tert-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dimethyl;
dimethylsiladiyl(2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium
dimethyl;
dimethylsiladiyl(2-ethyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium
dimethyl;
dimethylsiladiyl(2-n-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium
dimethyl
dimethylsiladiyl(2-iso-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium
dimethyl;
dimethylsiladiyl(2-n-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium
dimethyl;
dimethylsiladiyl(2-iso-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium
dimethyl;
dimethylsiladiyl(2-sec-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium
dimethyl;
dimethylsiladiyl(2-tert-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium
dimethyl;
9-silafluorendiyl(2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dimethyl;
9-silafluorendiyl(2-ethyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dimethyl;
9-silafluorendiyl(2-n-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dimethyl;
9-silafluorendiyl(2-iso-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dimethyl;
9-silafluorendiyl(2-n-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dimethyl;
9-silafluorendiyl(2-iso-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dimethyl;
9-silafluorendiyl(2-sec-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dimethyl;

9-silafluorendiyl(2-tert-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium dimethyl;

9-silafluorendiyl(2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium dimethyl;

9-silafluorendiyl(2-ethyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium dimethyl;

9-silafluorendiyl(2-n-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium dimethyl;

9-silafluorendiyl(2-iso-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium dimethyl;

9-silafluorendiyl(2-n-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium dimethyl;

9-silafluorendiyl(2-iso-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium dimethyl;

9-silafluorendiyl(2-sec-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium dimethyl;

9-silafluorendiyl(2-tert-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium dimethyl;

dimethylsiladiyl(2-methyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dichloride;

dimethylsiladiyl(2-ethyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dichloride;

dimethylsiladiyl(2-n-propyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dichloride;

dimethylsiladiyl(2-iso-propyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dichloride;

dimethylsiladiyl(2-n-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dichloride;

dimethylsiladiyl(2-iso-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dichloride;

dimethylsiladiyl(2-sec-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dichloride;

dimethylsiladiyl(2-tert-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dichloride;
dimethylsiladiyl(2-methyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂hafnium dichloride;
dimethylsiladiyl(2-ethyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂hafnium dichloride;
dimethylsiladiyl(2-n-propyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂hafnium dichloride;
dimethylsiladiyl(2-iso-propyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂hafnium dichloride;
dimethylsiladiyl(2-n-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂hafnium dichloride;
dimethylsiladiyl(2-iso-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂hafnium dichloride;
dimethylsiladiyl(2-sec-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂hafnium dichloride;
dimethylsiladiyl(2-tert-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂hafnium dichloride;
9-silafluorendiyl(2-methyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dichloride;
dimethylsiladiyl(2-ethyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂hafnium dichloride;
9-silafluorendiyl(2-n-propyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dichloride;
9-silafluorendiyl(2-iso-propyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dichloride;
9-silafluorendiyl(2-n-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dichloride;
9-silafluorendiyl(2-iso-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dichloride;
9-silafluorendiyl(2-sec-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dichloride;

9-silafluorendiyl(2-tert-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dichloride;
9-silafluorendiyl(2-methyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂hafnium dichloride;
9-silafluorendiyl(2-ethyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂hafnium dichloride;
9-silafluorendiyl(2-n-propyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂hafnium dichloride;
9-silafluorendiyl(2-iso-propyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂hafnium dichloride;
9-silafluorendiyl(2-n-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂hafnium dichloride;
9-silafluorendiyl(2-iso-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂hafnium dichloride;
9-silafluorendiyl(2-sec-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂hafnium dichloride;
9-silafluorendiyl(2-tert-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂hafnium dichloride;
dimethylsiladiyl(2-methyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
dimethylsiladiyl(2-ethyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
dimethylsiladiyl(2-n-propyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
dimethylsiladiyl(2-iso-propyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
dimethylsiladiyl(2-n-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
dimethylsiladiyl(2-iso-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dimethyl;

dimethylsiladiyl(2-sec-butyl, 4-[3',5'-bis-
 trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
 dimethylsiladiyl(2-tert-butyl, 4-[3',5'-bis-
 trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
 dimethylsiladiyl(2-methyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)
₂hafnium dimethyl;
 dimethylsiladiyl(2-ethyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)
₂hafnium dimethyl;
 dimethylsiladiyl(2-n-propyl, 4-[3',5'-bis-
 trifluoromethylphenyl]indenyl)₂hafnium dimethyl;
 dimethylsiladiyl(2-iso-propyl, 4-[3',5'-bis-
 trifluoromethylphenyl]indenyl)₂hafnium dimethyl;
 dimethylsiladiyl(2-n-butyl, 4-[3',5'-bis-
 trifluoromethylphenyl]indenyl)₂hafnium dimethyl;
 dimethylsiladiyl(2-iso-butyl, 4-[3',5'-bis-
 trifluoromethylphenyl]indenyl)₂hafnium dimethyl;
 dimethylsiladiyl(2-sec-butyl, 4-[3',5'-bis-
 trifluoromethylphenyl]indenyl)₂hafnium dimethyl;
 dimethylsiladiyl(2-tert-butyl, 4-[3',5'-bis-
 trifluoromethylphenyl]indenyl)₂hafnium dimethyl;
 9-silafluorendiyl(2-methyl, 4-[3',5'-bis-
 trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
 dimethylsiladiyl(2-ethyl, 4-[3',5'-bis-
 trifluoromethylphenyl]indenyl)₂hafnium dimethyl;
 9-silafluorendiyl(2-n-propyl, 4-[3',5'-bis-
 trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
 9-silafluorendiyl(2-iso-propyl, 4-[3',5'-bis-
 trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
 9-silafluorendiyl(2-n-butyl, 4-[3',5'-bis-
 trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
 9-silafluorendiyl(2-iso-butyl, 4-[3',5'-bis-
 trifluoromethylphenyl]indenyl)₂zirconium dimethyl;

9-silafluorendiyl(2-sec-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
 9-silafluorendiyl(2-tert-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
 9-silafluorendiyl(2-methyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂hafnium dimethyl;
 9-silafluorendiyl(2-ethyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂hafnium dimethyl;
 9-silafluorendiyl(2-n-propyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂hafnium dimethyl;
 9-silafluorendiyl(2-iso-propyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂hafnium dimethyl;
 9-silafluorendiyl(2-n-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂hafnium dimethyl;
 9-silafluorendiyl(2-iso-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂hafnium dimethyl;
 9-silafluorendiyl(2-sec-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂hafnium dimethyl;
 9-silafluorendiyl(2-tert-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂hafnium dimethyl;
 dimethylsiladiyl(2-ethyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dichloride;
 dimethylsiladiyl(2-n-propyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dichloride;
 dimethylsiladiyl(2-iso-propyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dichloride;
 dimethylsiladiyl(2-n-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dichloride;
 dimethylsiladiyl(2-iso-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dichloride;

dimethylsiladiyl(2-sec-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dichloride;
dimethylsiladiyl(2-tert-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dichloride;
dimethylsiladiyl(2-ethyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂hafnium dichloride;
dimethylsiladiyl(2-n-propyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂hafnium dichloride;
dimethylsiladiyl(2-iso-propyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂hafnium dichloride;
dimethylsiladiyl(2-n-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂hafnium dichloride;
dimethylsiladiyl(2-iso-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂hafnium dichloride;
dimethylsiladiyl(2-sec-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂hafnium dichloride;
dimethylsiladiyl(2-tert-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂hafnium dichloride;
9-silafluorendiyl(2-ethyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dichloride;
9-silafluorendiyl(2-n-propyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dichloride;
9-silafluorendiyl(2-iso-propyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dichloride;
9-silafluorendiyl(2-n-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dichloride;
9-silafluorendiyl(2-iso-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dichloride;
9-silafluorendiyl(2-sec-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dichloride;
9-silafluorendiyl(2-tert-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dichloride;

9-silafluorendiyl(2-ethyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂hafnium
 dichloride;
 9-silafluorendiyl(2-n-propyl, 4-[3',5'-di-iso-
 propylphenyl]indenyl)₂hafnium dichloride;
 9-silafluorendiyl(2-iso-propyl, 4-[3',5'-di-iso-
 propylphenyl]indenyl)₂hafnium dichloride;
 9-silafluorendiyl(2-n-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂hafnium
 dichloride;
 9-silafluorendiyl(2-iso-butyl, 4-[3',5'-di-iso-
 propylphenyl]indenyl)₂hafnium dichloride;
 9-silafluorendiyl(2-sec-butyl, 4-[3',5'-di-iso-
 propylphenyl]indenyl)₂hafnium dichloride;
 9-silafluorendiyl(2-tert-butyl, 4-[3',5'-di-iso-
 propylphenyl]indenyl)₂hafnium dichloride;
 dimethylsiladiyl(2-ethyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium
 dimethyl;
 dimethylsiladiyl(2-n-propyl, 4-[3',5'-di-iso-
 propylphenyl]indenyl)₂zirconium dimethyl
 dimethylsiladiyl(2-iso-propyl, 4-[3',5'-di-iso-
 propylphenyl]indenyl)₂zirconium dimethyl;
 dimethylsiladiyl(2-n-butyl, 4-[3',5'-di-iso-
 propylphenyl]indenyl)₂zirconium dimethyl;
 dimethylsiladiyl(2-isobutyl, 4-[3',5'-di-iso-
 propylphenyl]indenyl)₂zirconium dimethyl;
 dimethylsiladiyl(2-sec-butyl, 4-[3',5'-di-iso-
 propylphenyl]indenyl)₂zirconium dimethyl;
 dimethylsiladiyl(2-tert-butyl, 4-[3',5'-di-iso-
 propylphenyl]indenyl)₂zirconium dimethyl;
 dimethylsiladiyl(2-ethyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂hafnium
 dimethyl;
 dimethylsiladiyl(2-n-propyl, 4-[3',5'-di- iso-propylphenyl]indenyl)
₂hafnium dimethyl;

dimethylsiladiyl(2-iso-propyl, 4-[3',5'-di- iso-propylphenyl]indenyl)
₂hafnium dimethyl;

dimethylsiladiyl(2-n-butyl, 4-[3',5'-di- iso-propylphenyl]indenyl) ₂hafnium
dimethyl;

dimethylsiladiyl(2-iso-butyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dimethyl;

dimethylsiladiyl(2-sec-butyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dimethyl;

dimethylsiladiyl(2-tert-butyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dimethyl;

9-silafluorendiyl(2-ethyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium
dimethyl;

9-silafluorendiyl(2-n-propyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dimethyl;

9-silafluorendiyl(2-iso-propyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dimethyl;

9-silafluorendiyl(2-n-butyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dimethyl;

9-silafluorendiyl(2-iso-butyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dimethyl;

9-silafluorendiyl(2-sec-butyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dimethyl;

9-silafluorendiyl(2-tert-butyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dimethyl;

9-silafluorendiyl(2-ethyl, 4-[3',5'-di-iso-propylphenyl]indenyl) ₂hafnium
dimethyl;

9-silafluorendiyl(2-n-propyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂hafnium dimethyl;

9-silafluorendiyl(2-iso-propyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂hafnium dimethyl;

9-silafluorendiyl(2-n-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂hafnium
dimethyl;

9-silafluorendiyl(2-iso-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂hafnium dimethyl;
9-silafluorendiyl(2-sec-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂hafnium dimethyl;
9-silafluorendiyl(2-tert-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂hafnium dimethyl;
dimethylsiladiyl(2-methyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
dimethylsiladiyl(2-ethyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
dimethylsiladiyl(2-n-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
dimethylsiladiyl(2-iso-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
dimethylsiladiyl(2-n-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
dimethylsiladiyl(2-iso-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
dimethylsiladiyl(2-sec-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
dimethylsiladiyl(2-tert-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
dimethylsiladiyl(2-methyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dichloride;
dimethylsiladiyl(2-ethyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dichloride;
dimethylsiladiyl(2-n-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dichloride;
dimethylsiladiyl(2-iso-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dichloride;
dimethylsiladiyl(2-n-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dichloride;

dimethylsiladiyl(2-iso-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dichloride;

dimethylsiladiyl(2-sec-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dichloride;

dimethylsiladiyl(2-tert-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dichloride;

9-silafluorendiyl(2-methyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;

9-silafluorendiyl(2-ethyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;

9-silafluorendiyl(2-n-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;

9-silafluorendiyl(2-iso-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;

9-silafluorendiyl(2-n-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;

9-silafluorendiyl(2-iso-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;

9-silafluorendiyl(2-sec-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;

9-silafluorendiyl(2-tert-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;

9-silafluorendiyl(2-methyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dichloride;

9-silafluorendiyl(2-ethyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dichloride;

9-silafluorendiyl(2-n-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dichloride;

9-silafluorendiyl(2-iso-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dichloride;

9-silafluorendiyl(2-n-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dichloride;

9-silafluorendiyl(2-iso-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium
dichloride;
9-silafluorendiyl(2-sec-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium
dichloride;
9-silafluorendiyl(2-tert-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium
dichloride;
dimethylsiladiyl(2-methyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium
dimethyl;
dimethylsiladiyl(2-ethyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium
dimethyl;
dimethylsiladiyl(2-n-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium
dimethyl;
dimethylsiladiyl(2-iso-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium
dimethyl;
dimethylsiladiyl(2-n-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium
dimethyl;
dimethylsiladiyl(2-iso-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium
dimethyl;
dimethylsiladiyl(2-sec-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium
dimethyl;
dimethylsiladiyl(2-tert-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium
dimethyl;
dimethylsiladiyl(2-methyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium
dimethyl;
dimethylsiladiyl(2-ethyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium
dimethyl;
dimethylsiladiyl(2-n-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium
dimethyl;
dimethylsiladiyl(2-iso-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium
dimethyl;
dimethylsiladiyl(2-n-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium
dimethyl;

dimethylsiladiyl(2-iso-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dimethyl;

dimethylsiladiyl(2-sec-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dimethyl;

dimethylsiladiyl(2-tert-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dimethyl;

9-silafluorendiyl(2-methyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;

9-silafluorendiyl(2-ethyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;

9-silafluorendiyl(2-n-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;

9-silafluorendiyl(2-iso-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;

9-silafluorendiyl(2-n-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;

9-silafluorendiyl(2-iso-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;

9-silafluorendiyl(2-sec-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;

9-silafluorendiyl(2-tert-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;

9-silafluorendiyl(2-methyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dimethyl;

9-silafluorendiyl(2-ethyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dichloride;

9-silafluorendiyl(2-n-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dimethyl;

9-silafluorendiyl(2-iso-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dimethyl;

9-silafluorendiyl(2-n-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dimethyl;

9-silafluorendiyl(2-iso-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dimethyl;

9-silafluorendiyl(2-sec-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dimethyl;

9-silafluorendiyl(2-tert-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dimethyl;

dimethylsiladiyl(2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-ethyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-n-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-iso-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-n-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-iso-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-sec-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-tert-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-ethyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-n-propyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-iso-propyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-n-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-iso-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-sec-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-tert-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-ethyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-n-propyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-iso-propyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-n-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-iso-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-sec-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-tert-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-methyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-ethyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-n-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-iso-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-n-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-iso-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η⁴-1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-sec-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η⁴-1,4-diphenyl-1,3-butadiene;

dimethylsiladiyl(2-tert-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η⁴-1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η⁴-1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-ethyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η⁴-1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-n-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η⁴-1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-iso-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η⁴-1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-n-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η⁴-1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-iso-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η⁴-1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-sec-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η⁴-1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-tert-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η⁴-1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-ethyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η⁴-1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-n-propyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η⁴-1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-iso-propyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η⁴-1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-n-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η⁴-1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-iso-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-sec-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-tert-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-ethyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-n-propyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-iso-propyl, 4-[3',5'-di-iso-propylphenyl]indenyl) η^4 -1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-n-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-iso-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-sec-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-tert-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-methyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-ethyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-n-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-iso-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-n-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-iso-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-sec-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-tert-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium dichloride;

dimethylamidoborane(2-ethyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium dichloride;

dimethylamidoborane(2-n-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium dichloride;

dimethylamidoborane(2-iso-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium dichloride;

dimethylamidoborane(2-n-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium dichloride;

dimethylamidoborane(2-iso-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium dichloride;

dimethylamidoborane(2-sec-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium dichloride;

dimethylamidoborane(2-tert-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium dichloride;

dimethylamidoborane(2-ethyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dichloride;

dimethylamidoborane(2-n-propyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dichloride;

dimethylamidoborane(2-iso-propyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dichloride;

dimethylamidoborane(2-n-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dichloride;

dimethylamidoborane(2-iso-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dichloride;

dimethylamidoborane(2-sec-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dichloride;
dimethylamidoborane(2-tert-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dichloride;
dimethylamidoborane(2-ethyl, 4-[3',5'-di-isopropylphenyl]indenyl)₂zirconium dichloride;
dimethylamidoborane(2-n-propyl, 4-[3',5'-di-isopropylphenyl]indenyl)₂zirconium dichloride
dimethylamidoborane(2-iso-propyl, 4-[3',5'-di-isopropylphenyl]indenyl)₂zirconium dichloride;
dimethylamidoborane(2-n-butyl, 4-[3',5'-di-isopropylphenyl]indenyl)₂zirconium dichloride;
dimethylamidoborane(2-iso-butyl, 4-[3',5'-di-isopropylphenyl]indenyl)₂zirconium dichloride;
dimethylamidoborane(2-sec-butyl, 4-[3',5'-di-isopropylphenyl]indenyl)₂zirconium dichloride;
dimethylamidoborane(2-tert-butyl, 4-[3',5'-di-isopropylphenyl]indenyl)₂zirconium dichloride;
dimethylamidoborane(2-methyl, 4-[3',5'-diphenylphenyl]indenyl)₂zirconium dichloride;
dimethylamidoborane(2-ethyl, 4-[3',5'-diphenylphenyl]indenyl)₂zirconium dichloride;
dimethylamidoborane(2-n-propyl, 4-[3',5'-diphenylphenyl]indenyl)₂zirconium dichloride;
dimethylamidoborane(2-iso-propyl, 4-[3',5'-diphenylphenyl]indenyl)₂zirconium dichloride;
dimethylamidoborane(2-n-butyl, 4-[3',5'-diphenylphenyl]indenyl)₂zirconium dichloride;
dimethylamidoborane(2-iso-butyl, 4-[3',5'-diphenylphenyl]indenyl)₂zirconium dichloride;
dimethylamidoborane(2-sec-butyl, 4-[3',5'-diphenylphenyl]indenyl)₂zirconium dichloride;

dimethylamidoborane(2-tert-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;

dimethylamidoborane(2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-ethyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-n-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-iso-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-n-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-iso-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-sec-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-tert-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-ethyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-n-propyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-iso-propyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-n-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-iso-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-sec-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-tert-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-ethyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-n-propyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-iso-propyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-n-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-iso-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-sec-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-tert-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-methyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-ethyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-n-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-iso-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-n-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-iso-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-sec-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

dimethylamidoborane(2-tert-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η⁴-
1,4-diphenyl-1,3-butadiene;
dimethylamidoborane(2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂
zirconium dimethyl;
dimethylamidoborane(2-ethyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium
dimethyl;
dimethylamidoborane(2-n-propyl, 4-[3',5'-di-
tbutylphenyl]indenyl)₂zirconium dimethyl;
dimethylamidoborane(2-iso-propyl, 4-[3',5'-di-
tbutylphenyl]indenyl)₂zirconium dimethyl;
dimethylamidoborane(2-n-butyl, 4-[3',5'-di-
tbutylphenyl]indenyl)₂zirconium dimethyl;
dimethylamidoborane(2-iso-butyl, 4-[3',5'-di-
tbutylphenyl]indenyl)₂zirconium dimethyl;
dimethylamidoborane(2-sec-butyl, 4-[3',5'-di-
tbutylphenyl]indenyl)₂zirconium dimethyl;
dimethylamidoborane(2-tert-butyl, 4-[3',5'-di-
tbutylphenyl]indenyl)₂zirconium dimethyl;
dimethylamidoborane(2-ethyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
dimethylamidoborane(2-n-propyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
dimethylamidoborane(2-iso-propyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
dimethylamidoborane(2-n-butyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
dimethylamidoborane(2-iso-butyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
dimethylamidoborane(2-sec-butyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
dimethylamidoborane(2-tert-butyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dimethyl;

dimethylamidoborane(2-ethyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dimethyl;
dimethylamidoborane(2-n-propyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dimethyl
dimethylamidoborane(2-iso-propyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dimethyl;
dimethylamidoborane(2-n-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dimethyl;
dimethylamidoborane(2-iso-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dimethyl;
dimethylamidoborane(2-sec-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dimethyl;
dimethylamidoborane(2-tert-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dimethyl;
dimethylamidoborane(2-methyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;
dimethylamidoborane(2-ethyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;
dimethylamidoborane(2-n-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;
dimethylamidoborane(2-iso-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;
dimethylamidoborane(2-n-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;
dimethylamidoborane(2-iso-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;
dimethylamidoborane(2-sec-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;
dimethylamidoborane(2-tert-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;
diisopropylamidoborane(2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium dichloride;

diisopropylamidoborane(2-ethyl, 4-[3',5'-di-
tbutylphenyl]indenyl)₂zirconium dichloride;
diisopropylamidoborane(2-n-propyl, 4-[3',5'-di-
tbutylphenyl]indenyl)₂zirconium dichloride;
diisopropylamidoborane(2-iso-propyl, 4-[3',5'-di-
tbutylphenyl]indenyl)₂zirconium dichloride;
diisopropylamidoborane(2-n-butyl, 4-[3',5'-di-
tbutylphenyl]indenyl)₂zirconium dichloride;
diisopropylamidoborane(2-iso-butyl, 4-[3',5'-di-
tbutylphenyl]indenyl)₂zirconium dichloride;
diisopropylamidoborane(2-sec-butyl, 4-[3',5'-di-
tbutylphenyl]indenyl)₂zirconium dichloride;
diisopropylamidoborane(2-tert-butyl, 4-[3',5'-di-
tbutylphenyl]indenyl)₂zirconium dichloride;
diisopropylamidoborane(2-ethyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dichloride;
diisopropylamidoborane(2-n-propyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dichloride;
diisopropylamidoborane(2-iso-propyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dichloride;
diisopropylamidoborane(2-n-butyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dichloride;
diisopropylamidoborane(2-iso-butyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dichloride;
diisopropylamidoborane(2-sec-butyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dichloride;
diisopropylamidoborane(2-tert-butyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dichloride;
diisopropylamidoborane(2-ethyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dichloride;
diisopropylamidoborane(2-n-propyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dichloride

diisopropylamidoborane(2-iso-propyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dichloride;
 diisopropylamidoborane(2-n-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dichloride;
 diisopropylamidoborane(2-iso-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dichloride;
 diisopropylamidoborane(2-sec-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dichloride;
 diisopropylamidoborane(2-tert-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dichloride;
 diisopropylamidoborane(2-methyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
 diisopropylamidoborane(2-ethyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
 diisopropylamidoborane(2-n-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
 diisopropylamidoborane(2-iso-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
 diisopropylamidoborane(2-n-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
 diisopropylamidoborane(2-iso-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
 diisopropylamidoborane(2-sec-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
 diisopropylamidoborane(2-tert-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
 diisopropylamidoborane(2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
 diisopropylamidoborane(2-ethyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
 diisopropylamidoborane(2-n-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

diisopropylamidoborane(2-iso-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

diisopropylamidoborane(2-n-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

diisopropylamidoborane(2-iso-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

diisopropylamidoborane(2-sec-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

diisopropylamidoborane(2-tert-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

diisopropylamidoborane(2-ethyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

diisopropylamidoborane(2-n-propyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

diisopropylamidoborane(2-iso-propyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

diisopropylamidoborane(2-n-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

diisopropylamidoborane(2-iso-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

diisopropylamidoborane(2-sec-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

diisopropylamidoborane(2-tert-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

diisopropylamidoborane(2-ethyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

diisopropylamidoborane(2-n-propyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

diisopropylamidoborane(2-iso-propyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

diisopropylamidoborane(2-n-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂
 η^4 -1,4-diphenyl-1,3-butadiene;
 diisopropylamidoborane(2-iso-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂
 η^4 -1,4-diphenyl-1,3-butadiene;
 diisopropylamidoborane(2-sec-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
 diisopropylamidoborane(2-tert-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
 diisopropylamidoborane(2-methyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -
 1,4-diphenyl-1,3-butadiene;
 diisopropylamidoborane(2-ethyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -
 1,4-diphenyl-1,3-butadiene;
 diisopropylamidoborane(2-n-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -
 1,4-diphenyl-1,3-butadiene;
 diisopropylamidoborane(2-iso-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂
 η^4 -1,4-diphenyl-1,3-butadiene;
 diisopropylamidoborane(2-n-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -
 1,4-diphenyl-1,3-butadiene;
 diisopropylamidoborane(2-iso-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -
 1,4-diphenyl-1,3-butadiene;
 diisopropylamidoborane(2-sec-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂
 η^4 -1,4-diphenyl-1,3-butadiene;
 diisopropylamidoborane(2-tert-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂
 η^4 -1,4-diphenyl-1,3-butadiene;
 diisopropylamidoborane(2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium dimethyl;
 diisopropylamidoborane(2-ethyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium dimethyl;
 diisopropylamidoborane(2-n-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium dimethyl;

diisopropylamidoborane(2-iso-propyl, 4-[3',5'-di-
tbutylphenyl]indenyl)₂zirconium dimethyl;
diisopropylamidoborane(2-n-butyl, 4-[3',5'-di-
tbutylphenyl]indenyl)₂zirconium dimethyl;
diisopropylamidoborane(2-iso-butyl, 4-[3',5'-di-
tbutylphenyl]indenyl)₂zirconium dimethyl;
diisopropylamidoborane(2-sec-butyl, 4-[3',5'-di-
tbutylphenyl]indenyl)₂zirconium dimethyl;
diisopropylamidoborane(2-tert-butyl, 4-[3',5'-di-
tbutylphenyl]indenyl)₂zirconium dimethyl;
diisopropylamidoborane(2-ethyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
diisopropylamidoborane(2-n-propyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
diisopropylamidoborane(2-iso-propyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
diisopropylamidoborane(2-n-butyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
diisopropylamidoborane(2-iso-butyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
diisopropylamidoborane(2-sec-butyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
diisopropylamidoborane(2-tert-butyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
diisopropylamidoborane(2-ethyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dimethyl;
diisopropylamidoborane(2-n-propyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dimethyl
diisopropylamidoborane(2-iso-propyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dimethyl;
diisopropylamidoborane(2-n-butyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dimethyl;

diisopropylamidoborane(2-iso-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dimethyl;
diisopropylamidoborane(2-sec-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dimethyl;
diisopropylamidoborane(2-tert-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dimethyl;
diisopropylamidoborane(2-methyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;
diisopropylamidoborane(2-ethyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;
diisopropylamidoborane(2-n-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;
diisopropylamidoborane(2-iso-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;
diisopropylamidoborane(2-n-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;
diisopropylamidoborane(2-iso-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;
diisopropylamidoborane(2-sec-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;
diisopropylamidoborane(2-tert-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;
bis(trimethylsilyl)amidoborane(2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium dichloride;
bis(trimethylsilyl)amidoborane(2-ethyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium dichloride;
bis(trimethylsilyl)amidoborane(2-n-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium dichloride;
bis(trimethylsilyl)amidoborane(2-iso-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium dichloride;
bis(trimethylsilyl)amidoborane(2-n-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium dichloride;

bis(trimethylsilyl)amidoborane(2-iso-butyl, 4-[3',5'-di-
tbutylphenyl]indenyl)₂zirconium dichloride;
bis(trimethylsilyl)amidoborane(2-sec-butyl, 4-[3',5'-di-
tbutylphenyl]indenyl)₂zirconium dichloride;
bis(trimethylsilyl)amidoborane(2-tert-butyl, 4-[3',5'-di-
tbutylphenyl]indenyl)₂zirconium dichloride;
bis(trimethylsilyl)amidoborane(2-ethyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dichloride;
bis(trimethylsilyl)amidoborane(2-n-propyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dichloride;
bis(trimethylsilyl)amidoborane(2-iso-propyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dichloride;
bis(trimethylsilyl)amidoborane(2-n-butyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dichloride;
bis(trimethylsilyl)amidoborane(2-iso-butyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dichloride;
bis(trimethylsilyl)amidoborane(2-sec-butyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dichloride;
bis(trimethylsilyl)amidoborane(2-tert-butyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dichloride;
bis(trimethylsilyl)amidoborane(2-ethyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dichloride;
bis(trimethylsilyl)amidoborane(2-n-propyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dichloride
bis(trimethylsilyl)amidoborane(2-iso-propyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dichloride;
bis(trimethylsilyl)amidoborane(2-n-butyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dichloride;
bis(trimethylsilyl)amidoborane(2-iso-butyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dichloride;
bis(trimethylsilyl)amidoborane(2-sec-butyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dichloride;

bis(trimethylsilyl)amidoborane(2-tert-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂zirconium dichloride;
 bis(trimethylsilyl)amidoborane(2-methyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
 bis(trimethylsilyl)amidoborane(2-ethyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
 bis(trimethylsilyl)amidoborane(2-n-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
 bis(trimethylsilyl)amidoborane(2-iso-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
 bis(trimethylsilyl)amidoborane(2-n-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
 bis(trimethylsilyl)amidoborane(2-iso-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
 bis(trimethylsilyl)amidoborane(2-sec-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
 bis(trimethylsilyl)amidoborane(2-tert-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
 bis(trimethylsilyl)amidoborane(2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
 bis(trimethylsilyl)amidoborane(2-ethyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
 bis(trimethylsilyl)amidoborane(2-n-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
 bis(trimethylsilyl)amidoborane(2-iso-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
 bis(trimethylsilyl)amidoborane(2-n-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
 bis(trimethylsilyl)amidoborane(2-iso-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

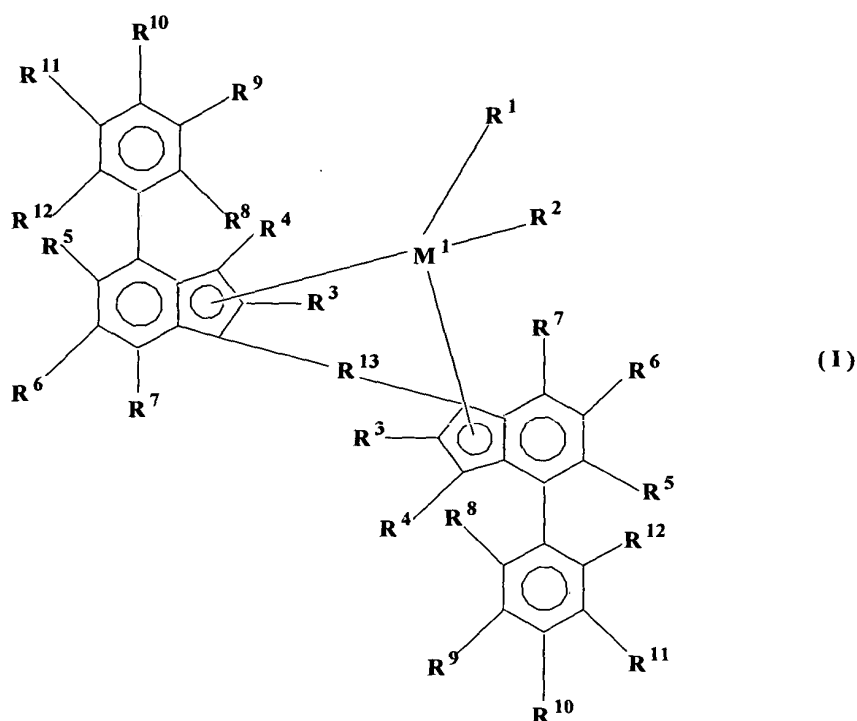
bis(trimethylsilyl)amidoborane(2-sec-butyl, 4-[3',5'-di-
tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
bis(trimethylsilyl)amidoborane(2-tert-butyl, 4-[3',5'-di-
tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
bis(trimethylsilyl)amidoborane(2-ethyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
bis(trimethylsilyl)amidoborane(2-n-propyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
bis(trimethylsilyl)amidoborane(2-iso-propyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
bis(trimethylsilyl)amidoborane(2-n-butyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
bis(trimethylsilyl)amidoborane(2-iso-butyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
bis(trimethylsilyl)amidoborane(2-sec-butyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
bis(trimethylsilyl)amidoborane(2-tert-butyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
bis(trimethylsilyl)amidoborane(2-ethyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
bis(trimethylsilyl)amidoborane(2-n-propyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
bis(trimethylsilyl)amidoborane(2-iso-propyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
bis(trimethylsilyl)amidoborane(2-n-butyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
bis(trimethylsilyl)amidoborane(2-iso-butyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
bis(trimethylsilyl)amidoborane(2-sec-butyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;

bis(trimethylsilyl)amidoborane(2-tert-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
bis(trimethylsilyl)amidoborane(2-methyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
bis(trimethylsilyl)amidoborane(2-ethyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
bis(trimethylsilyl)amidoborane(2-n-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
bis(trimethylsilyl)amidoborane(2-iso-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
bis(trimethylsilyl)amidoborane(2-n-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
bis(trimethylsilyl)amidoborane(2-iso-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
bis(trimethylsilyl)amidoborane(2-sec-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
bis(trimethylsilyl)amidoborane(2-tert-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene;
bis(trimethylsilyl)amidoborane(2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ zirconium dimethyl;
bis(trimethylsilyl)amidoborane(2-ethyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ zirconium dimethyl;
bis(trimethylsilyl)amidoborane(2-n-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ zirconium dimethyl;
bis(trimethylsilyl)amidoborane(2-iso-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ zirconium dimethyl;
bis(trimethylsilyl)amidoborane(2-n-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ zirconium dimethyl;
bis(trimethylsilyl)amidoborane(2-iso-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ zirconium dimethyl;

bis(trimethylsilyl)amidoborane(2-sec-butyl, 4-[3',5'-di-
tbutylphenyl]indenyl)₂zirconium dimethyl;
bis(trimethylsilyl)amidoborane(2-tert-butyl, 4-[3',5'-di-
tbutylphenyl]indenyl)₂zirconium dimethyl;
bis(trimethylsilyl)amidoborane(2-ethyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
bis(trimethylsilyl)amidoborane(2-n-propyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
bis(trimethylsilyl)amidoborane(2-iso-propyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
bis(trimethylsilyl)amidoborane(2-n-butyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
bis(trimethylsilyl)amidoborane(2-iso-butyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
bis(trimethylsilyl)amidoborane(2-sec-butyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
bis(trimethylsilyl)amidoborane(2-tert-butyl, 4-[3',5'-bis-
trifluoromethylphenyl]indenyl)₂zirconium dimethyl;
bis(trimethylsilyl)amidoborane(2-ethyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dimethyl;
bis(trimethylsilyl)amidoborane(2-n-propyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dimethyl
bis(trimethylsilyl)amidoborane(2-iso-propyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dimethyl;
bis(trimethylsilyl)amidoborane(2-n-butyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dimethyl;
bis(trimethylsilyl)amidoborane(2-iso-butyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dimethyl;
bis(trimethylsilyl)amidoborane(2-sec-butyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dimethyl;
bis(trimethylsilyl)amidoborane(2-tert-butyl, 4-[3',5'-di-iso-
propylphenyl]indenyl)₂zirconium dimethyl;

bis(trimethylsilyl)amidoborane(2-methyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;
bis(trimethylsilyl)amidoborane(2-ethyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;
bis(trimethylsilyl)amidoborane(2-n-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;
bis(trimethylsilyl)amidoborane(2-iso-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;
bis(trimethylsilyl)amidoborane(2-n-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;
bis(trimethylsilyl)amidoborane(2-iso-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;
bis(trimethylsilyl)amidoborane(2-sec-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl; and
bis(trimethylsilyl)amidoborane(2-tert-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl.

15. The process of claim 1 where the metallocene compound is represented by the formula:



wherein:

M^1 is selected from the group consisting of titanium, zirconium, hafnium, vanadium, niobium, tantalum, chromium, molybdenum and tungsten;

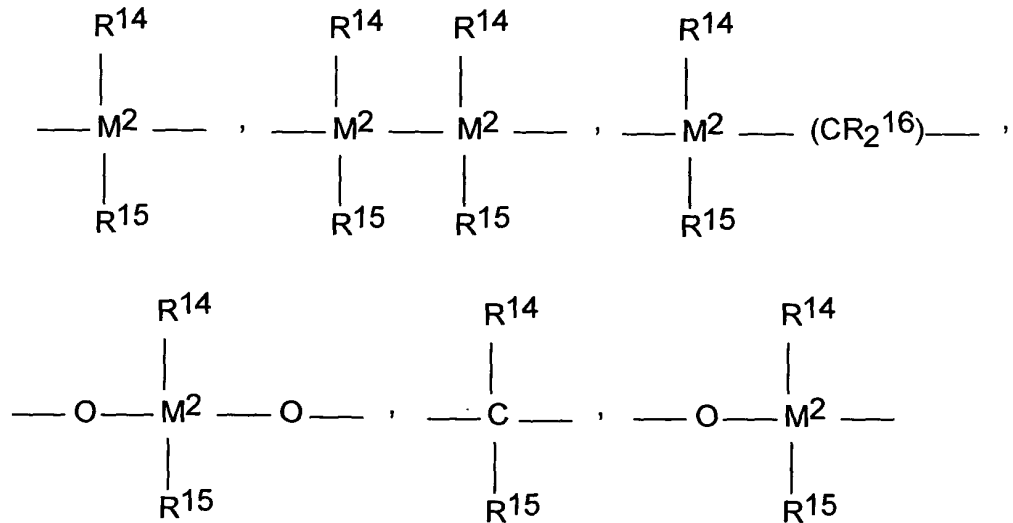
R^1 and R^2 are identical or different, and are one of a hydrogen atom, a C_1 - C_{10} alkyl group, a C_1 - C_{10} alkoxy group, a C_6 - C_{10} aryl group, a C_6 - C_{10} aryloxy group, a C_2 - C_{10} alkenyl group, a C_2 - C_{40} alkenyl group, a C_7 - C_{40} arylalkyl group, a C_7 - C_{40} alkylaryl group, a C_8 - C_{40} arylalkenyl group, an OH group or a halogen atom; R^1 and R^2 may also be joined together to form an alkanediyl group or a conjugated C_{4-40} diene ligand which is coordinated to M^1 in a metallocyclopentene fashion; R^1 and R^2 may also be identical or different conjugated dienes, optionally substituted with one or more hydrocarbyl, tri(hydrocarbyl)silyl groups or hydrocarbyl, tri(hydrocarbyl)silylhydrocarbyl groups, said dienes having up to 30 atoms not counting hydrogen and forming a π complex with M, examples include 1,4-diphenyl-1,3-butadiene, 1,3-pentadiene, 2-methyl-1,3-pentadiene, 2,4-hexadiene, 1-phenyl-1,3-pentadiene, 1,4-dibenzyl-1,3-

butadiene, 1,4-ditolyl-1,3-butadiene, 1,4-bis(trimethylsilyl)-1,3-butadiene, and 1,4-dinaphthyl-1,3-butadiene;

Each R^3 is identical or different from the other R^3 and is each a hydrogen atom, a halogen atom, a C_1 - C_{10} alkyl group which may be halogenated, a C_6 - C_{10} aryl group which may be halogenated, a C_2 - C_{10} alkenyl group, a C_7 - C_{40} -arylalkyl group, a C_7 - C_{40} alkylaryl group, a C_8 - C_{40} arylalkenyl group, a $-NR'^2$, $-SR'$, $-OR'$, $-OSiR'^3$ or $-PR'^2$ radical, wherein R' is one of a halogen atom, a C_1 - C_{10} alkyl group, or a C_6 - C_{10} aryl group;

R^4 to R^{12} are identical or different and are hydrogen, or are as defined for R^3 or two or more adjacent radicals R^5 to R^7 together with the atoms connecting them form one or more rings;

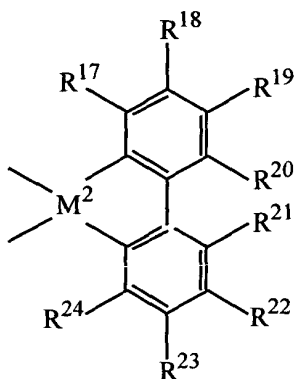
R^{13} is



$-B(R^{14})-$, $-Al(R^{14})-$, $-Ge-$, $-Sn-$, $-O-$, $-S-$, $-SO-$, $-SO_2-$, $-N(R^{14})-$, $-CO-$, $-P(R^{14})-$, or $-P(O)(R^{14})-$;

wherein: R^{14} , R^{15} and R^{16} are identical or different and are a hydrogen atom, a halogen atom, a C_1 - C_{20} branched or linear alkyl group, a C_1 - C_{20} fluoroalkyl or silaalkyl group, a C_6 - C_{30} aryl group, a C_6 - C_{30} fluoroaryl group, a

C₁-C₂₀ alkoxy group, a C₂-C₂₀ alkenyl group, a C₇-C₄₀ arylalkyl group, a C₈-C₄₀ arylalkenyl group, a C₇-C₄₀ alkylaryl group, or R¹⁴ and R¹⁵, together with the atoms binding them, form a cyclic ring;



or, R¹³ is represented by the formula:

wherein: R¹⁷ to R²⁴ are as defined for R¹ and R², or two or more adjacent radicals R¹⁷ to R²⁴, including R²⁰ and R²¹, together with the atoms connecting them form one or more rings; and

M² is one or more carbons, silicon, germanium or tin.

16. The process of claim 1 where the reaction medium comprises comonomer selected from the group consisting of ethylene, butene, hexene, octene, and decene.

17. The process of claim 1 where the metallocene comprises a substituted or unsubstituted silyl bridged bis-indenyl metallocene.

18. The process of claim 1 where the metallocene catalyst compound is combined with propylene in an amount of up to 1.0 mole% hydrogen in the reactor.

19. The process of claim 1 wherein the activator comprises an ionizing activator.

20. The process of claim 1 wherein the activator comprises alumoxane.
21. The process of claim 1 wherein the activator comprises a non-coordinating anion.
22. The process of claim 1 wherein the activator is selected from the group consisting of:
 trimethylammonium tetraphenylborate, triethylammonium tetraphenylborate, tripropylammonium tetraphenylborate, tri(*n*-butyl)ammonium tetraphenylborate, tri(*tert*-butyl)ammonium tetraphenylborate, N,N-dimethylanilinium tetraphenylborate, N,N-diethylanilinium tetraphenylborate, N,N-dimethyl-(2,4,6-trimethylanilinium) tetraphenylborate, trimethylammonium tetrakis(pentafluorophenyl)borate, triethylammonium tetrakis(pentafluorophenyl)borate, tripropylammonium tetrakis(pentafluorophenyl)borate, tri(*n*-butyl)ammonium tetrakis(pentafluorophenyl)borate, tri(*sec*-butyl)ammonium tetrakis(pentafluorophenyl)borate, N,N-dimethylanilinium tetrakis(pentafluorophenyl)borate, N,N-diethylanilinium tetrakis(pentafluorophenyl)borate, N,N-dimethyl-(2,4,6-trimethylanilinium) tetrakis(pentafluorophenyl)borate, trimethylammonium tetrakis-(2,3,4,6-tetrafluorophenyl) borate, triethylammonium tetrakis-(2,3,4,6-tetrafluorophenyl)borate, tripropylammonium tetrakis-(2,3,4,6-tetrafluorophenyl)borate, tri(*n*-butyl)ammonium tetrakis-(2,3,4,6-tetrafluorophenyl)borate, dimethyl(*tert*-butyl)ammonium tetrakis-(2,3,4,6-tetrafluorophenyl)borate, N,N-dimethylanilinium tetrakis-(2,3,4,6-tetrafluorophenyl)borate, N,N-diethylanilinium tetrakis-(2,3,4,6-tetrafluorophenyl)borate, N,N-dimethyl-(2,4,6-trimethylanilinium) tetrakis-(2,3,4,6-tetrafluorophenyl)borate, trimethylammonium tetrakis(perfluoronaphthyl)borate, triethylammonium tetrakis(perfluoronaphthyl)borate, tripropylammonium tetrakis(perfluoronaphthyl)borate, tri(*n*-butyl)ammonium

tetrakis(perfluoronaphthyl)borate, tri(*tert*-butyl)ammonium
 tetrakis(perfluoronaphthyl)borate, N,N-dimethylanilinium
 tetrakis(perfluoronaphthyl)borate, N,N-diethylanilinium
 tetrakis(perfluoronaphthyl)borate, N,N-dimethyl-(2,4,6-
 trimethylanilinium) tetrakis(perfluoronaphthyl)borate,
 trimethylammonium tetrakis(perfluorobiphenyl)borate, triethylammonium
 tetrakis(perfluorobiphenyl)borate, tripropylammonium
 tetrakis(perfluorobiphenyl)borate, tri(*n*-butyl)ammonium
 tetrakis(perfluorobiphenyl)borate, tri(*tert*-butyl)ammonium
 tetrakis(perfluorobiphenyl)borate, N,N-dimethylanilinium
 tetrakis(perfluorobiphenyl)borate, N,N-diethylanilinium
 tetrakis(perfluorobiphenyl)borate, N,N-dimethyl-(2,4,6-
 trimethylanilinium) tetrakis(perfluorobiphenyl)borate,
 trimethylammonium tetrakis(3,5-bis(trifluoromethyl)phenyl)borate,
 triethylammonium tetrakis(3,5-bis(trifluoromethyl)phenyl)borate,
 tripropylammonium tetrakis(3,5-bis(trifluoromethyl)phenyl)borate, tri(*n*-
 butyl)ammonium tetrakis(3,5-bis(trifluoromethyl)phenyl)borate, tri(*tert*-
 butyl)ammonium tetrakis(3,5-bis(trifluoromethyl)phenyl)borate, N,N-
 dimethylanilinium tetrakis(3,5-bis(trifluoromethyl)phenyl)borate, N,N-
 diethylanilinium tetrakis(3,5-bis(trifluoromethyl)phenyl)borate, N,N-
 dimethyl-(2,4,6-trimethylanilinium) tetrakis(3,5-
 bis(trifluoromethyl)phenyl)borate, di-(*iso*-propyl)ammonium
 tetrakis(pentafluorophenyl)borate, dicyclohexylammonium
 tetrakis(pentafluorophenyl)borate; tri(*o*-tolyl)phosponium
 tetrakis(pentafluorophenyl)borate, tri(2,6-dimethylphenyl)phosponium
 tetrakis(pentafluorophenyl)borate, tropillium tetraphenylborate,
 triphenylcarbenium tetraphenylborate, triphenylphosponium
 tetraphenylborate, triethylsilylium tetraphenylborate,
 benzene(diazonium)tetraphenylborate, tropillium
 tetrakis(pentafluorophenyl)borate, triphenylcarbenium
 tetrakis(pentafluorophenyl)borate, triphenylphosponium
 tetrakis(pentafluorophenyl)borate, triethylsilylium

tetrakis(pentafluorophenyl)borate, benzene(diazonium) tetrakis(pentafluorophenyl)borate, tropillium tetrakis-(2,3,4,6-tetrafluorophenyl)borate, triphenylcarbenium tetrakis-(2,3,4,6-tetrafluorophenyl)borate, triphenylphosphonium tetrakis-(2,3,4,6-tetrafluorophenyl)borate, triethylsilylium tetrakis-(2,3,4,6-tetrafluorophenyl)borate, benzene(diazonium) tetrakis-(2,3,4,6-tetrafluorophenyl)borate, tropillium tetrakis(perfluoronaphthyl)borate, triphenylcarbenium tetrakis(perfluoronaphthyl)borate, triphenylphosphonium tetrakis(perfluoronaphthyl)borate, triethylsilylium tetrakis(perfluoronaphthyl)borate, benzene(diazonium) tetrakis(perfluoronaphthyl)borate, tropillium tetrakis(perfluorobiphenyl)borate, triphenylcarbenium tetrakis(perfluorobiphenyl)borate, triphenylphosphonium tetrakis(perfluorobiphenyl)borate, triethylsilylium tetrakis(perfluorobiphenyl)borate, benzene(diazonium) tetrakis(perfluorobiphenyl)borate, tropillium tetrakis(3,5-bis(trifluoromethyl)phenyl)borate, triphenylcarbenium tetrakis(3,5-bis(trifluoromethyl)phenyl)borate, triphenylphosphonium tetrakis(3,5-bis(trifluoromethyl)phenyl)borate, triethylsilylium tetrakis(3,5-bis(trifluoromethyl)phenyl)borate, and benzene(diazonium) tetrakis(3,5-bis(trifluoromethyl)phenyl)borate.

23. The process of claim 1 wherein the activator comprises one or more of: dimethylanilinium tetrakis(perfluorophenyl) boron, tri(n-butyl)ammonium tetrakis(pentafluorophenyl)boron, N,N-dimethylanilinium tetra(perfluorophenyl)borate and/or triphenylcarbenium tetra(perfluorophenyl)borate.
24. The process of claim 1 where the catalyst compound, the activator or both are supported.
25. The process of claim 1 wherein the support comprises silica.

26. The process of claim 1 wherein the process occurs in an autoclave reactor.
27. The process of claim 1 wherein the process occurs in a tubular reactor.
28. The process of claim 1 wherein the process occurs in a loop reactor.
29. The process of claim 1 wherein the polymerization medium comprises at least two phases.
30. A propylene polymer where the polymer has a heat of fusion of 70 J/g and has a g'_{avg} of 0.98 or less.
31. The polymer of claim 30 wherein the polymer has a g'_{avg} of 0.96 or less.
32. The polymer of claim 30 wherein the polymer has a weight average molecular weight of 50,000 to 2,000,000.
33. The polymer of claim 30 wherein the polymer comprises 1 to 20 mole % of comonomer.
34. The polymer of claim 30 wherein the polymer comprises comonomer selected from the group consisting of ethylene, butene, pentene, hexene, heptene, octene, nonene, decene, undecene, dodecene, 3,5,5-trimethylhexene-1, 4-methylpentene-1, 3-methylpentene-1.
35. The polymer of claim 30 wherein the polymer comprises less than 3 weight % ethylene.
36. The polymer of claim 30 wherein the polymer is characterized by a melt flow rate of 0.1 to 500 dg/min.

37. The polymer of claim 30 wherein the polymer is characterized by a percent crystallinity of 30 to 50 %.
38. The polymer of claim 30 wherein the polymer is characterized by a melting temperature of 150 to 165°C.
39. The polymer of claim 30 wherein the polymer is characterized by a crystallization temperature between 100 and 110°C.
40. The polymer of claim 30 wherein the polymer is characterized by an Mw/Mn of 2 to 4.
41. The polymer of claim 30 wherein the polymer is characterized by a ration of extensional viscosity at break to linear viscosity of 2.5 or more.